FILE 'REGISTRY' ENTERED AT 17:14:52 ON 14 APR 2004

L1 STRUCTURE UPLOADED

L2 0 S L1

L3 STRUCTURE UPLOADED

L4 2 S L3

L5 2 S L3

L6 30 S L3 SSS FULL

FILE 'CAPLUS' ENTERED AT 17:18:44 ON 14 APR 2004

=> s 16 L7 8 L6

=> s 17 not thieno? 7040 THIENO?

L8 8 L7 NOT THIENO?

=> d 11

L1 HAS NO ANSWERS

L1 STR

G1 C,O

Structure attributes must be viewed using STN Express query preparation.

=> d 13 L3 HAS NO ANSWERS

L3 STI

G1 C,O

Structure attributes must be viewed using STN Express query preparation.

```
=> d 1-8 bib abs hitstr
```

```
ANSWER 1 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
1.8
     2004:33981 CAPLUS
ΑN
DN
     140:94043
     Preparation of imidazoquinolinesulfonamides as inducers of cytokine
TТ
    biosynthesis.
IN
     Griesgraber, George W.
     3M Innovative Properties Company, USA
PΑ
    U.S., 86 pp., Cont. of U.S. Ser. No. 27,273, abandoned.
SO
     CODEN: USXXAM
DT
     Patent
LA
    English
FAN.CNT 1
     PATENT NO.
                      KIND
                           DATE
                                          APPLICATION NO. DATE
                      ----
                                           -----
PΙ
     US 6677349
                      В1
                            20040113
                                          US 2003-425054
                                                           20030428
```

20011221

B1

PRAI US 2001-27273

GI

MARPAT 140:94043

Title compds. [I; R1 = alkyl-NR3SO2XR4, alkenyl-NR3SO2XR4; X = bond, R5; R4 = (substituted) aryl, heteroaryl, heterocyclyl, alkyl, alkenyl; R2 = H, (substituted) alkyl, alkenyl, aryl, heteroaryl, alkyl-O-alkyl, alkyl-O-alkenyl; R3 = H, alkyl; R5 = H, alkyl; R4R5 = atoms to form a 3-7 membered (substituted) heterocyclyl; n = 0-4; R = alkyl, alkoxy, halo, CF3], were prepared Thus, a stirred solution of 4-chloro-3-nitroquinoline in CH2Cl2 was treated with Et3N and 1,2-diamino-2-methylpropane to give 2-methyl-Nl-(3-nitroquinolin-4-yl)propane-1,2-diamine. A solution of the latter in THF was cooled to  $0^{\circ}$  and treated with a 1 N NaOH solution of di-tert-Bu dicarbonate under rapid stirring followed by warming to ambient temperature and stirring overnight; addnl. di-tert-Bu dicarbonate was added and stirring was continued for 3 d. to give tert-Bu 1,1-dimethyl-2-[(3nitroquinolin-4-yl)amino]ethylcarbamate. This in PhMe was treated with Pt/C and shaken under H2 for 6 h to give tert-Bu 2-(3-aminoquinolin-4-y1)-1,1-dimethylethylcarbamate. The aminoquinoline in CH2Cl2 was cooled to $0^{\circ}$  and treated with Et3N and ethoxyacetyl chloride to give a syrup which was refluxed overnight with Et3N in EtOH to give tert-Bu 2-[2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]-1,1dimethylethylcarbamate. The imidazoquinoline in CH2Cl2 was treated with 3-chloroperoxybenzoic acid and stirred 2 h to give tert-Bu 2-[2-(ethoxymethyl)-5-oxido-1H-imidazo[4,5-c]quinolin-1-yl]-1,1dimethylethylcarbamate. The latter in 1,2-dichloroethane was heated to 70° and treated with concentrated NH4OH; p-toluenesulfonyl chloride was added and the reaction mixture was heated in a sealed tube for 2 h to give tert-Bu 2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]-1,1dimethylethylcarbamate . This was refluxed in EtOH containing HCl for 2 h to give 1-(2-amino-2-methylpropyl)-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-4-amine. 1-(2-Amino-2-methylpropyl)-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-4-amine in CH2Cl2 at 0° was treated with Et3N and MeSO2Cl and the reaction was allowed to warm to ambient temperature overnight to give N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]-1,1dimethylethyl]methanesulfonamide (claimed compound). I induced interferon in an in vitro human blood cell system at lowest effective concns. of 0.0001-10 μM.

### T 642473-53-8P 642473-62-9P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(Uses)

(preparation of imidazoquinolinesulfonamides as inducers of cytokine biosynthesis)

RN 642473-53-8 CAPLUS

CN Methanesulfonamide, N-[3-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5c]quinolin-1-yl]propyl]- (9CI) (CA INDEX NAME)

RN 642473-62-9 CAPLUS

CN Methanesulfonamide, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]-1,1-dimethylethyl]- (9CI) (CA INDEX NAME)

# IT 642473-94-7P 642473-95-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of imidazoquinolinesulfonamides as inducers of cytokine biosynthesis)

RN 642473-94-7 CAPLUS

CN Carbamic acid, [2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]-1,1-dimethylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 642473-95-8 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanamine, 4-amino-2-(ethoxymethyl)-  $\alpha,\alpha$ -dimethyl- (9CI) (CA INDEX NAME)

#### THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 63 ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 2 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
```

ΑN 2003:590833 CAPLUS

DN 139:149629

Preparation of amidoimidazo[4,5-c] quinolines as immune response modifiers ΤI

Coleman, Patrick L.; Crooks, Stephen L.; Griesgraber, George W.; Lindstrom, Kyle J.; Merrill, Bryon A.; Rice, Michael J.

PΑ

SO U.S. Pat. Appl. Publ., 85 pp., Cont.-in-part of U.S. 6,451,810.

CODEN: USXXCO

DTPatent English

LΑ

	FAN.CNT 5									
		PATENT NO.		DATE	APPLICATION NO.	DATE				
	PΙ	US 2003144283	A1	20030731	US 2001-27218	20011221				
		US 6451810	B1	20020917	US 2000-589580	20000607				
		ZA 2001009854	Α	20030228	ZA 2001-9854	20011129				
		ZA 2001009857	A	20030228	ZA 2001-9857	20011129				
		ZA 2001009861	A	20030228	ZA 2001-9861	20011129				
		US 2004029877	A1	20040212	US 2001-27272	20011221				
	PRAI	US 1999-138365P	P	19990610						
		US 2000-589580	A2	20000607						
		US 2000-589216	A1	20000607						
		US 2001-166321	A1	20010615						
	OS	MARPAT 139:14962	9							
	GT									

$$NH_2$$
 $NH_2$ 
 $NH_2$ 

AΒ Title compds. I [wherein R1 = alkyl-NR3COR4; R3 = independently H, alkylor (un)substituted alkyl(hetero)aryl; R4 = alkyl or (un)substituted (hetero)aryl; R2 = H, alkenyl, (un)substituted alkyl or (hetero)aryl, etc.; R = independently alkyl, alkoxy, halo, CF3; <math>n = 0-4; and their pharmaceutically acceptable salts] were prepared as immune response modifiers. For example, II was prepared by acylation of 1-(4-aminobutyl)-1H-imidazo[4,5-c]quinolin-4-amine with benzoyl chloride in pyridine. II induced interferon  $\alpha$  and TNF  $\!\alpha$  at concns. of 0.37  $\mu\text{M}$  and 10  $\mu\text{M},$  resp., in human cells. Thus, I and their pharmaceutical compns. are useful for the treatment of a variety of conditions including viral diseases and neoplastic diseases (no data). ΙT

313347-68-1P RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(immune response modifier; preparation of (amido)imidazo[4,5-c]quinolines as immune response modifiers)

RN 313347-68-1 CAPLUS

CN lH-Thieno[3,4-d]imidazole-4-pentanamide, N-[2-[4-amino-2-(ethoxymethyl)-lH-imidazo[4,5-c]quinolin-1-yl]ethyl]hexahydro-2-oxo-, (3aS,4S,6aR)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 313347-67-0 CMF C25 H33 N7 O3 S

Absolute stereochemistry.

CM 2

CRN 76-05-1 CMF C2 H F3 O2

IT 570411-23-3P, N-[2-[4-Amino-2-(ethoxymethyl)-1H-imidazo[4,5c]quinolin-1-yl]-1,1-dimethylethyl]-2-ethoxyacetamide

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(immune response modifiers; preparation of (amido)imidazo[4,5-c]quinolines as immune response modifiers)

RN 570411-23-3 CAPLUS

CN Acetamide, N-[2-{4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]-1,1-dimethylethyl]-2-ethoxy- (9CI) (CA INDEX NAME)

### IT 313350-40-2

RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of (amido)imidazo[4,5-c]quinolines as immune response
 modifiers)

RN 313350-40-2 CAPLUS

$$\begin{array}{c|c} \mathbf{H_2N-CH_2-CH_2} \\ \mathbf{EtO-CH_2} \\ \hline \\ \mathbf{I} \\ \mathbf{N-NH_2} \\ \end{array}$$

● HCl

```
ANSWER 3 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
ΑN
      2003:434369 CAPLUS
      139:26620
DΝ
      Topical pharmaceuticals comprising an immune response modifier
TI
      Skwierczynski, Raymond D.; Busch, Terri F.; Gust-Heiting, Amy L.;
IN
      Fretland, Mary T.; Scholz, Matthew T.
      3M Innovative Properties Company, USA
SO
      PCT Int. Appl., 123 pp.
      CODEN: PIXXD2
DT
      Patent
LA
      English
FAN.CNT 1
      PATENT NO.
                          KIND DATE
                                                   APPLICATION NO. DATE
                                 20030605
                                                   WO 2002-US38190
                                                                        20021127
ΡI
     WO 2003045391
                           A1
          W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
               CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
               KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK,
               SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM,
               ZW, AM, AZ, BY
           RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
               CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
               NE, SN, TD, TG
      US 2003199538
                                 20031023
                                                   US 2002-306019
                           A1
                                                                        20021127
PRAI US 2001-340605P
                           Ρ
                                  20011129
      US 2002-378452P
                                  20020506
os
      MARPAT 139:26620
GI
```

AB Pharmaceutical formulations comprise an immune response modifier (IRM) chosen from imidazoquinoline amines, imidazotetrahydroquinoline amines, imidazopyridine amines, and other heterocyclic fused ring derivs.; a fatty acid; and a hydrophobic, aprotic component miscible with the fatty acid are useful for the treatment of dermal associated conditions. Topical

j.

Ι

formulations containing, e.g., I are provided. In one embodiment, the topical formulations are advantageous for treatment of actinic keratosis, postsurgical scars, basal cell carcinoma, atopic dermatitis, and warts.

IT 534568-83-7 534568-84-8 534568-86-0

534568-89-3

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (topical pharmaceuticals comprising an immune response modifier)

534568-83-7 CAPLUS RN

Ethanesulfonamide, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5c]quinolin-1-yl]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} O \\ \parallel \\ Et-S \\ \hline \\ O \\ EtO-CH_2 \\ \hline \\ N \\ \hline \\ NH_2 \\ \end{array}$$

534568-84-8 CAPLUS RN

 $\label{lem:propanamide} Propanamide, \ N-[2-[4-amino-2-(ethoxymethyl)-lH-imidazo[4,5-c]quinolin-1-lh-imidazo[4,5$ CN yl]ethyl]- (9CI) (CA INDEX NAME)

534568-86-0 CAPLUS RN

 $\label{thm:lower_section} Thio urea, \ \ N-\{2-\{4-amino-2-(ethoxymethyl)-1H-imidazo\{4,5-c\}quinolin-1-1,5-c\}\} and the section of the section$ CN yl]ethyl]-N'-ethyl- (9CI) (CA INDEX NAME)

534568-89-3 CAPLUS RN

Cyclopentanecarboxamide, N-[3-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5c]quinolin-1-yl]propyl]- (9CI) (CA INDEX NAME)

#### THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 8 ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
L8
```

2003:429098 CAPLUS ΑN

DN

Preparation of imidazoquinolinamines as immune response modifiers. TΙ

Crooks, Stephen L.; Griesgraber, George W.; Lindstrom, Kyle J.; Merrill, Bryon A.; Rice, Michael J.

3M Innovative Properties Company, USA

U.S., 66 pp., Cont.-in-part of U.S. 6,541,485. CODEN: USXXAM SO

DТ Patent

LAEnglish

FAN.CNT 5										
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE						
PI US 6573273	B1	20030603	US 2001-28255	20011221						
US 6541485	B1	20030401	US 2000-589236	20000607						
ZA 2001009854	Α	20030228	ZA 2001-9854	20011129						
ZA 2001009857	Α	20030228	ZA 2001-9857	20011129						
ZA 2001009861	,A	20030228	ZA 2001-9861	20011129						
US 2004029877	A1	20040212	US 2001-27272	20011221						
US 2004014754	A1	20040122	US 2003-352604	20030128						
US 2004019048	A1	20040129	US 2003-370800	20030220						
PRAI US 1999-138365P	P	19990610								
US 2000-589236	A2	20000607								
US 2000-589216	A1	20000607								
US 2001-166321	A1	20010615								
US 2001-28255	A1	20011221								
OS MARPAT 139:6873										
GI										

Ι

Title compds. [I; R1 = ANR3CYNR5XR4; A = alkylene, alkenylene; Y = O, S; X = bond, CO, SO2; R3 = H, alkyl; R4 = (substituted) aryl, heteroaryl, alkyl, etc.; R5 = H, alkyl; R4R5 = atoms to form 3-7 membered (un) substituted heterocyclic ring; R2 = H, alkyl, aryl, etc.; R = alkyl, alkoxy, halo, CF3; n = 0-4], were prepared Thus, reaction of 4-morpholinecarbonyl chloride with 1-(4-aminobutyl)-1H-imidazo(4,5-aminobutyl)c]quinolin-4-amine in pyridine afforded N4-[4-[4-amino-1H-imidazo[4,5c]quinolin-1-yl]butyl]-4-morpholinecarboxamide which induced interferon- $\alpha$  biosynthesis in human cells at a lowest concentration of 3.33

μМ.

IT 313383-61-8P 313383-62-9P 313383-63-0P 313383-64-1P 313383-65-2P 313383-66-3P 313385-13-6P 313385-28-3P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of imidazoquinolinamines as immune response modifiers)

RN 313383-61-8 CAPLUS

CN Urea, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]-N'-propyl- (9CI) (CA INDEX NAME)

RN 313383-62-9 CAPLUS

CN Urea, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]-N'-propyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 313383-61-8 CMF C19 H26 N6 O2

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 313383-63-0 CAPLUS

CN Urea, N-[2-[4-amino-2-(ethoxymethyl)-lH-imidazo[4,5-c]quinolin-1-yl]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)

RN

 $313383-64-1 \quad CAPLUS \\ Urea, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]-N'-phenyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)$ CN

CM

CRN 313383-63-0 CMF C22 H24 N6 O2

2 CM

CRN 76-05-1 CMF C2 H F3 O2

313383-65-2 CAPLUS

Thiourea, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]-N'-cyclohexyl- (9CI) (CA INDEX NAME) CN

RN 313383-66-3 CAPLUS

CN Thiourea, N-[2-[4-amino-2-(ethoxymethyl)-lH-imidazo[4,5-c]quinolin-l-yl]ethyl]-N'-cyclohexyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM :

CRN 313383-65-2 CMF C22 H30 N6 O S

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 313385-13-6 CAPLUS

CN Urea, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]-N'-cyclohexyl-(9CI) (CA INDEX NAME)

RN 313385-28-3 CAPLUS

CN Benzenesulfonamide, N-[[[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]amino]carbonyl]- (9CI) (CA INDEX NAME)

IT 313350-40-2

RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of imidazoquinolinamines as immune response modifiers)

RN 313350-40-2 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanamine, 4-amino-2-(ethoxymethyl)-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L8 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2001:360094 CAPLUS
- DN 134:366874
- ${\tt TI} \quad {\tt Preparation} \ {\tt of} \ {\tt dye-labeled} \ {\tt imidazoquinolines} \ {\tt and} \ {\tt analogs} \ {\tt as} \ {\tt immunomodulators}$
- IN Wei, Ai-Ping; Tomai, Mark A.; Rice, Michael J.

```
3M Innovative Properties Company, USA
     PCT Int. Appl., 31 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
     PATENT NO.
                                              APPLICATION NO. DATE
                       KIND DATE
                              20010517
                                             WO 2000-US30366 · 20001103
ΡI
     WO 2001034709
                        A1
         W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
             CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI,
             GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
             KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,
             MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD,
             RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
              BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                             US 2000-705072 20001102
     US 6376669
                             20020423
                        B1
     EP 1228147
                        A1
                             20020807
                                              EP 2000-980282
                                                                20001103
     EP 1228147
                        В1
                             20040204
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
                                              JP 2001-537411
     JP 2004500347
                        T2
                             20040108
                                                                20001103
                              20040215
                                              AT 2000-980282
                                                                20001103
     AT 258963
     US 2002120141
                              20020829
                                              US 2002-78645
                                                                20020219
                        A1
                              20031007
     US 6630588
                        B2
     NO 2002001974
                              20020628
                                              NO 2002-1974
                                                                20020425
PRAI US 1999-163724P
                        Ρ
                              19991105
     US 2000-705072
                              20001102
     WO 2000-US30366
                        W
                              20001103
     MARPAT 134:366874
OS
GT
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$$R3$$
 $N$ 
 $N$ 
 $R^2$ 
 $R^2$ 
 $R^2$ 

AB Title compds. [I; R1 = ZR; R = dye residue; R2 = H, (un)substituted alkyl, (hetero)aryl(alkyl), etc.; R3,R4 = H, halo, alkyl, alkoxy, etc.; R3R4 = atoms to complete a ring; Z = spacer group], useful, inter alia, for determining the binding and/or receptor sites of the mols., were prepared Thus, 3-nitro-4-quinolinol was aminated by HZN(CH2)4CHCO2CMe3 and the reduced product cyclocondensed with MeOCH2CH2COCl to give, in 3 addnl. steps, I [R1 = (CH2)4NHR, R2 = CH2CH2OMe, R3R4 = CH:CHCH:CH](II; R = H) which was amidated by fluorescein 5-isothiocyanate to give II (R = CSNHZ1R5, R5 = 6-hydroxy-3-oxo-3H-xanthen-9-yl, Z1 = 3-carboxy-1,4-phenylene). Data for biol. activity of 1 prepared I were given.

IT 340128-24-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of dye-labeled imidazoquinolines and analogs as immunomodulators)

RN 340128-24-7 CAPLUS
CN Boron, [N-[6-[(2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-l-yl]ethyl]amino]-6-oxohexyl]-5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-kN)methyl]-1H-pyrrole-2-propanamidato-kNl]difluoro-, (T-4)-(9CI) (CA INDEX NAME)

### IT 339545-53-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of dye-labeled imidazoquinolines and analogs as immunomodulators)

RN 339545-53-8 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanamine, 4-amino-2-(ethoxymethyl)-, trihydrochloride (9CI) (CA INDEX NAME)

## ●3 HCl

# RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L8 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
```

AN 2000:900462 CAPLUS

DN 134:56667

 $\mbox{TI}$  Preparation of sulfonamide and sulfamide substituted imidazoquinolines as immune response modifiers

IN Crooks, Stephen L.; Lindstrom, Kyle J.; Merrill, Bryon A.; Rice, Michael J.

PA 3M Innovative Properties Company, USA

SO PCT Int. Appl., 111 pp.

CODEN: PIXXD2

DT Patent

LA FAN.		glish 5																
	PA	rent I	NO.		KI	ND	DATE	<u>.</u>		A:	PPLI	CATI	N NC	o. 	DATE			
ΡI	WO	2000	0765.	19	A	1	2000	1221		M	O 20	00-U	S157:	22	2000	0608		
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			NO,	NΖ,	PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SK,	SL,	ТJ,	TM,	TR,
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20020424
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The title compds. [I; R1 = alkylNR3SO2XR4, alkenylNR3SO2XR4 (wherein X = a bond, NR5; R3 = H, alkyl; R4 = (un)substituted aryl, heteroaryl, alkyl, etc.; R5 = H, alkyl; R4 and R5 can combine to form 3-7 membered (un)substituted heterocyclic ring); R2 = H, alkyl, aryl, etc.; R = alkyl, alkoxy, halo, CF3; n = 0-4], useful as immune response modifiers, were prepared Thus, reacting 5-dimethylamino-1-naphthalenesulfonyl chloride with  $1-(4-aminobutyl)-2-butyl-1H-imidazo[4,5-c]quinolin-4-amine in the presence of N,N-diisopropylethylamine in CH2Cl2 afforded the naphthalenesulfonamide II which induced interferon <math display="inline">\alpha$  and TNF $\alpha$  biosynthesis in human cells at 0.12  $\mu$ M and 3.33  $\mu$ M, resp. The compds. I can induce the biosynthesis of various cytokines such as interferon  $\alpha$  and TNF $\alpha$  (data given), and are useful in the treatment of a variety of conditions including viral diseases and neoplastic diseases.

IT 313357-78-7P 313357-79-8P 313357-80-1P 313357-81-2P 313357-82-3P 313357-83-4P 313360-03-1P 313360-04-2P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of sulfonamide and sulfamide substituted imidazoquinolines as immune response modifiers)

RN 313357-78-7 CAPLUS

CN Methanesulfonamide, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5c]quinolin-1-yl]ethyl]- (9CI) (CA INDEX NAME)

RN 313357-79-8 CAPLUS

CN Methanesulfonamide, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM

CRN 313357-78-7 CMF C16 H21 N5 O3 S

$$\begin{array}{c} \text{O} \\ \parallel \\ \text{Me-S----} & \text{NH-CH}_2\text{--CH}_2 \\ \parallel \\ \text{O} & \text{EtO-CH}_2 \\ \parallel \\ \text{N} \\ \end{array} \begin{array}{c} \parallel \\ \parallel \\ \text{N} \\ \text{NH}_2 \\ \end{array}$$

CM

CRN 76-05-1 CMF C2 H F3 O2

RN

313357-80-1 CAPLUS
2-Thiophenesulfonamide, N-[2-[4-amino-2-(ethoxymethyl)-lH-imidazo[4,5-c]quinolin-l-yl]ethyl]- (9CI) (CA INDEX NAME) CN

RN

313357-81-2 CAPLUS
2-Thiophenesulfonamide, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME) CN

CM 1

CRN 313357-80-1

CMF C19 H21 N5 O3 S2

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 313357-82-3 CAPLUS

CN 1-Naphthalenesulfonamide, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]-5-(dimethylamino)- (9CI) (CA INDEX NAME)

RN 313357-83-4 CAPLUS

CN 1-Naphthalenesulfonamide, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]-5-(dimethylamino)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 313357-82-3 CMF C27 H30 N6 O3 S

CM

CRN 76-05-1 CMF C2 H F3 O2

RN

313360-03-1 CAPLUS Sulfamide, N'-[2-[4-amino-2-(ethoxymethyl)-lH-imidazo[4,5-c]quinolin-1-yl]ethyl]-N,N-dimethyl- (9CI) (CA INDEX NAME) CN

RN

313360-04-2 CAPLUS Sulfamide, N'-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-CN yl]ethyl]-N,N-dimethyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM

CRN 313360-03-1 CMF C17 H24 N6 O3 S

CM 2

CRN 76-05-1 CMF C2 H F3 O2

# RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ANSWER 7 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
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     2000:900461 CAPLUS
AN
     134:56666
DΝ
ΤI
     Preparation of urea substituted imidazoquinolines as immune response
     modifiers
IN
     Crooks, Stephen L.; Merrill, Bryon A.; Rice, Michael J.
     3M Innovative Properties Company, USA
PΑ
SO
     PCT Int. Appl., 106 pp.
     CODEN: PIXXD2
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$$R_{\rm R}$$
  $R^2$   $N_{\rm R}$   $N_{\rm R}$ 

AB The title compds. [I; R1 = alkylNR3CYNR5XR4, alkenylNR3CYNR5XR4 (wherein Y = O, S; X = a bond, CO, SO2; R3 = H, alkyl; R4 = (un)substituted aryl, heteroaryl, alkyl, etc.; R5 = H, alkyl; R4 and R5 can combine to form 3-7 membered (un)substituted heterocyclic ring); R2 = H, alkyl,aryl, etc.; R = alkyl, alkoxy, halo, CF3; n = 0-4], useful as immune response modifiers, were prepared Thus, reacting 4-morpholinecarbonyl chloride with 1-(4-aminobutyl)-lH-imidazo[4,5-c]quinolin-4-amine in pyridine afforded II which induced interferon  $\alpha$  biosynthesis in human cells at 3.33  $\mu M$ . The compds. I can induce the biosynthesis of various cytokines such as interferon  $\alpha$  and TNF $\alpha$  (data given), and are useful in the treatment of a variety of conditions including viral diseases and neoplastic diseases.

IT 313383-61-8P 313383-62-9P 313383-63-0P 313383-64-1P 313383-65-2P 313383-66-3P 313385-13-6P 313385-28-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of urea substituted imidazoquinolines as immune response modifiers)

RN 313383-61-8 CAPLUS

CN Urea, N-[2-[4-amino-2-(ethoxymethyl)-lH-imidazo[4,5-c]quinolin-1-yl}ethyl]-N'-propyl- (9CI) (CA INDEX NAME)

RN 313383-62-9 CAPLUS

CN Urea, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]-N'-propyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 313383-61-8 CMF C19 H26 N6 O2

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 313383-63-0 CAPLUS

CN Urea, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]N'-phenyl- (9CI) (CA INDEX NAME)

RN 313383-64-1 CAPLUS

CN Urea, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]N'-phenyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 313383-63-0 CMF C22 H24 N6 O2

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 313383-65-2 CAPLUS

CN Thiourea, N-[2-[4-amino-2-(ethoxymethyl)-lH-imidazo[4,5-c]quinolin-1-yl]ethyl]-N'-cyclohexyl- (9CI) (CA INDEX NAME)

RN 313383-66-3 CAPLUS

CN Thiourea, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]-N'-cyclohexyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM

CRN 313383-65-2 CMF C22 H30 N6 O S

CM :

CRN 76-05-1 CMF C2 H F3 O2

RN 313385-13-6 CAPLUS

CN Urea, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]-

N'-cyclohexyl- (9CI) (CA INDEX NAME)

RN 313385-28-3 CAPLUS

CN Benzenesulfonamide, N-[[[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]amino]carbonyl]- (9CI) (CA INDEX NAME)

IT 313350-40-2

RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of urea substituted imidazoquinolines as immune response
 modifiers)

RN 313350-40-2 CAPLUS

● HCl

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:900448 CAPLUS

DN 134:56665

TI Preparation of amide substituted imidazoquinolines as immune response

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modifiers
TN
     Coleman, Patrick L.; Crooks, Stephen L.; Lindstrom, Kyle J.; Merrill,
     Bryon A.; Rice, Michael J.
     3M Innovative Properties Company, USA
     PCT Int. Appl., 170 pp.
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     MARPAT 134:56665
GΙ
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AB The title compds. [I; R1 = alkylNR3COR4, alkenylNR3COR4 (wherein R4 = (un)substituted aryl, heteroaryl, alkyl, etc.); R2 = H, alkyl, alkenyl, etc.; R = alkyl, alkoxy, halo, CF3; n = 0-4] and their pharmaceutically acceptable salts, useful as immune response modifiers, were prepared Thus, reacting 1-(4-aminobutyl)-1H-imidazo[4,5-c]quinolin-4-amine with benzoyl chloride in pyridine afforded the benzamide II which showed the lowest concentration of 0.37  $\mu$ M to induce interferon in human cells. The compds. I can induce the biosynthesis of various cytokines (data given for interferon  $\alpha$  and TNF $\alpha$ ) and are useful in the treatment of a variety of conditions including viral diseases and neoplastic diseases.

T 313347-67-0P 313347-68-1P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of amide substituted imidazoquinolines as immune response modifiers)

RN 313347-67-0 CAPLUS

 $\text{CN} \qquad \text{1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[2-[4-amino-2-(ethoxymethyl)-1H-models]}$ 

imidazo[4,5-c]quinolin-1-yl]ethyl]hexahydro-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 313347-68-1 CAPLUS

CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]hexahydro-2-oxo-, (3aS,4S,6aR)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 313347-67-0 CMF C25 H33 N7 O3 S

Absolute stereochemistry.

CM 2

CRN 76-05-1 CMF C2 H F3 O2

### IT 313350-40-2

RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of amide substituted imidazoquinolines as immune response modifiers)

RN 313350-40-2 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanamine, 4-amino-2-(ethoxymethyl)-, monohydrochloride (9CI) (CA INDEX NAME)

• HCl

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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10734306
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Ll

L9

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FILE 'REGISTRY' ENTERED AT 15:29:22 ON 14 APR 2004

STRUCTURE UPLOADED

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15 S L1 SSS FULL L3

FILE 'CAPLUS' ENTERED AT 15:32:38 ON 14 APR 2004

L4 3 S L3

FILE 'REGISTRY' ENTERED AT 15:38:48 ON 14 APR 2004

STRUCTURE UPLOADED  $L_5$ 

L6 4 S L5

66 S L5 SSS FULL L7

L8 51 S L7 NOT L3

FILE 'CAPLUS' ENTERED AT 15:40:29 ON 14 APR 2004

4 S L8

SELECT L9 1 RN

FILE 'REGISTRY' ENTERED AT 16:28:16 ON 14 APR 2004

L10 337 S E1-E337

L1112 S L10 AND ETHOXYMETHYL

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188 C17 H23 N5 O/MF

1 L11 AND C17 H23 N5 O/MF L12

=> d scan

L12 1 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

1H-Imidazo[4,5-c]quinoline-1-ethanamine, 4-amino-2-(ethoxymethyl)-

 $\alpha, \alpha$ -dimethyl- (9CI)

C17 H23 N5 O

# \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

# ALL ANSWERS HAVE BEEN SCANNED

=> d all

L12 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN

642473-95-8 REGISTRY Entered STN: 28 Jan 2004

ED

CN  ${\tt 1H-Imidazo\,[4,5-c]\,quinoline-1-ethanamine,\,\,4-amino-2-(ethoxymethyl)-1}$ 

 $\alpha$ ,  $\alpha$ -dimethyl- (9CI) (CA INDEX NAME)

MF C17 H23 N5 O

SR CA

STN Files: CA, CAPLUS, USPATFULL LC

Ring System Data

Elemental	Elemental	Size of	Ring System	Ring	RID
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Bioconc. Factor (BCF)	1	8 Hq	(1) ACD
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Enthalpy of Vap. (HVAP)	81.60+/-3.0 kJ/mol		(1) ACD
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H donors (HD)	4		(1) ACD
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Molar Solubility (SLB.MOL)	>=1 mol/L	pH 4	(1) ACD
Molar Solubility (SLB.MOL)	>=1 mol/L	pH 7	(1) ACD
Molar Solubility (SLB.MOL)	>=0.01 - <0.1 mol/L	рн 8	(1) ACD
Molar Solubility (SLB.MOL)	<0.01 mol/L	рH 10	(1) ACD
Molecular Weight (MW)	313.40	ĺ	(1) ACD
pKa (PKA)	9.15+/-0.50	Most Basic	(1) ACD
Vapor Pressure (VP)	1.12E-11 Torr	25 deg C	(1) ACD

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software Solaris V4.76 ((C) 1994-2004 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

# REFERENCE 1

- AN140:94043 CA
- ΤI Preparation of imidazoquinolinesulfonamides as inducers of cytokine biosynthesis.
- IN Griesgraber, George W.
- PΑ
- 3M Innovative Properties Company, USA U.S., 86 pp., Cont. of U.S. Ser. No. 27,273, abandoned. CODEN: USXXAM so
- DT Patent
- LΑ English
- ICM A61K031-4745 IC
  - ICS A61K031-541; C07D471-04; C07D417-14; A61P037-02

NCL 514293000

CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom)) Section cross-reference(s): 1, 63

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE
PI US 6677349 B1 20040113 US 2003-425054 20030428

PRAI US 2001-27273 20011221

Ι

GI

AB Title compds. [I; R1 = alkyl-NR3SO2XR4, alkenyl-NR3SO2XR4; X = bond, R5; R4 = (substituted) aryl, heteroaryl, heterocyclyl, alkyl, alkenyl; R2 = H, (substituted) alkyl, alkenyl, aryl, heteroaryl, alkyl-O-alkyl, alkyl-O-alkenyl; R3 = H, alkyl; R5 = H, alkyl; R4R5 = atoms to form a 3-7 membered (substituted) heterocyclyl; n = 0-4; R = alkyl, alkoxy, halo, CF3], were prepared Thus, a stirred solution of 4-chloro-3-nitroquinoline in CH2Cl2 was treated with Et3N and 1,2-diamino-2-methylpropane to give 2-methyl-N1-(3-nitroquinolin-4-yl)propane-1,2-diamine. A solution of the latter in THF was cooled to 0° and treated with a 1 N NaOH solution of di-tert-Bu dicarbonate under rapid stirring followed by warming to ambient temperature and stirring overnight; addnl. di-tert-Bu dicarbonate was added and stirring was continued for 3 d. to give tert-Bu 1,1-dimethyl-2-[(3nitroquinolin-4-yl)amino]ethylcarbamate. This in PhMe was treated with Pt/C and shaken under H2 for 6 h to give tert-Bu 2-(3-aminoquinolin-4-yl)-1,1-dimethylethylcarbamate. The aminoquinoline in CH2Cl2 was cooled to 0° and treated with Et3N and ethoxyacetyl chloride to give a syrup which was refluxed overnight with Et3N in EtOH to give tert-Bu 2-[2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]-1,1dimethylethylcarbamate. The imidazoquinoline in CH2C12 was treated with 3-chloroperoxybenzoic acid and stirred 2 h to give tert-Bu 2-[2-(ethoxymethyl)-5-oxido-1H-imidazo[4,5-c]quinolin-1-yl]-1,1dimethylethylcarbamate. The latter in 1,2-dichloroethane was heated to 70° and treated with concentrated NH4OH; p-toluenesulfonyl chloride was added and the reaction mixture was heated in a sealed tube for 2 h to give tert-Bu 2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]-1,1dimethylethylcarbamate . This was refluxed in EtOH containing HCl for 2 h to give 1-(2-amino-2-methylpropyl)-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-4-amine. 1-(2-Amino-2-methylpropyl)-2-(ethoxymethyl)-1H-imidazo[4,5c]quinolin-4-amine in CH2Cl2 at 0° was treated with Et3N and MeSO2Cl and the reaction was allowed to warm to ambient temperature overnight to give N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]-1,1dimethylethyl]methanesulfonamide (claimed compound). I induced interferon in an in vitro human blood cell system at lowest effective concns. of 0.0001-10 μΜ.

imidazoquinolinesulfonamide prepn cytokine biosynthesis inhibitor; interferon tumor necrosis factor induction imidazoquinolinesulfonamide prepn

IT Cytokines

ST

Interferons

Tumor necrosis factors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (inducers; preparation of imidazoquinolinesulfonamides as inducers of cytokine biosynthesis)

IT Drug delivery systems

Human

(preparation of imidazoquinolinesulfonamides as inducers of cytokine biosynthesis)

IT	313355-83-8P	313355-85-0P	313355-87-2P	313355-89-4P	313355-90-7P
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TT

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(Uses)
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(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
   (preparation of imidazoquinolinesulfonamides as inducers of cytokine
   biosynthesis)
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98-09-9, Benzenesulfonyl chloride 98-74-8, 4-Nitrobenzenesulfonyl
          121-51-7, 3-Nitrobenzenesulfonyl chloride 124-63-0,
chloride
Methanesulfonyl chloride 349-88-2, 4-Fluorobenzenesulfonyl chloride
358-23-6, Trifluoromethanesulfonic anhydride 594-44-5, Ethanesulfonyl
          605-65-2, 5-Dimethylamino-1-naphthalenesulfonyl chloride
chloride
811-93-8, 1,2-Diamino-2-methylpropane 1633-82-5, 3-Chloropropylsulfonyl
          1939-99-7, α-Toluenesulfonyl chloride
chloride
                                                  2386-60-9,
1-Butanesulfonyl chloride 7143-01-3, Methanesulfonic anhydride
7-1, Dimethylsulfamoyl chloride 14077-58-8, Ethoxyacetyl chloride
16629-19-9, 2-Thiophenesulfonyl chloride 39061-97-7,
4-Chloro-3-nitroquinoline 105627-79-0, Isoquinoline-5-sulfonyl chloride
hydrochloride
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RL: RCT (Reactant); RACT (Reactant or reagent)
   (preparation of imidazoquinolinesulfonamides as inducers of cytokine
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P511 CAPLUS

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biosynthesis)
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     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of imidazoquinolinesulfonamides as inducers of cytokine
        biosynthesis)
            THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 63
(1) Andre; US 4988815 A 1991 CAPLUS
(2) Anon; EP 0394026 1990 CAPLUS
(3) Anon; JP 09-208584 1997 CAPLUS
(4) Anon; JP 09-255926 1999
(5) Anon; JP 11-222432 1999 CAPLUS
(6) Anon; WO 0047719 2000 CAPLUS
(7) Anon; WO 0076518 2000 CAPLUS
(8) Anon; JP 2000247884 2000 CAPLUS
(9) Anon; WO 0174343 2001 CAPLUS
(10) Anon; EP 1104764 2001 CAPLUS
(11) Anon; WO 02102377 2002 CAPLUS
(12) Anon; WO 0236592 2002 CAPLUS
(13) Anon; WO 0246188 2002 CAPLUS
(14) Anon; WO 0246189 2002 CAPLUS
(15) Anon; WO 0246190 2002 CAPLUS
(16) Anon; WO 0246191 2002 CAPLUS
(17) Anon; WO 0246192 2002 CAPLUS
(18) Anon; WO 0246193 2002 CAPLUS
(19) Anon; WO 0246749 2002 CAPLUS
(20) Anon; WO 03020889 2003 CAPLUS
(21) Bachman; J Org Chem 1950, V15, P1278 CAPLUS
(22) Baranov; 1976 CAPLUS
(23) Beaurline; US 5939090 A 1999
(24) Berenyi; J Heterocyclic Chem 1981, V18, P1537 CAPLUS
(25) Brennan; Biotechniques 1983, Jun/Jul, P78
(26) Chollet; Pharmaceutical Development and Technology 1999, V4(1), P35 CAPLUS
(27) Coleman; US 6451810 B1 2002 CAPLUS
(28) Crooks; US 6331539 B1 2001 CAPLUS
(29) Crooks; US 6541485 B1 2003 CAPLUS
(30) Dellaria; US 6525064 B1 2003 CAPLUS
(31) Dellaria; US 6545016 B1 2003 CAPLUS
(32) Dellaria; US 6545017 B1 2003 CAPLUS
(33) Gerster; US 4689338 A 1987 CAPLUS
(34) Gerster; US 4698348 A 1987 CAPLUS
(35) Gerster; US 4929624 A 1990 CAPLUS
(36) Gerster; US 5037986 A 1991 CAPLUS
(37) Gerster; US 5175296 A 1992 CAPLUS
(38) Gerster; US 5266575 A 1993 CAPLUS
(39) Gerster; US 5346905 A 1994 CAPLUS
(40) Gerster; US 5367076 A 1994 CAPLUS
(41) Gerster; US 5389640 A 1995 CAPLUS
(42) Gerster; US 5741908 A 1998 CAPLUS
(43) Gerster; US 5756747 A 1998 CAPLUS
(44) Gerster; US 6110929 A 2000 CAPLUS
(45) Gerster; US 6194425 B1 2001 CAPLUS
(46) Gester; US 5268376 A 1993 CAPLUS
(47) Hedenstrom; US 20020058674 A1 2002 CAPLUS
(48) Jain; J Med Chem 1968, V11, P87 CAPLUS
(49) Lindstrom; US 5446153 A 1995 CAPLUS
(50) Lindstrom; US 5482936 A 1996 CAPLUS
(51) Lindstrom; US 5693811 A 1997 CAPLUS
(52) Littell; US 3314941 A 1967 CAPLUS
(53) Miller; US 6083505 A 2000 CAPLUS
(54) Nanba; US 6069149 A 2000 CAPLUS
(55) Nikolaides; US 5352784 A 1994 CAPLUS
(56) Nikolaides; US 5395937 A 1995 CAPLUS
(57) Rice; US 6376669 B1 2002 CAPLUS
(58) Skwierczynski; US 6245776 B1 2001 CAPLUS
(59) Smith; US 20020055517 A1 2002
(60) Testerman; Journal of Leukocyte Biology 1995, V58, P365 CAPLUS
(61) Tomai; US 6039969 A 2000
(62) Wick; US 5238944 A 1993 CAPLUS
(63) Wozniak; Journal of the Royal Netherlands Chemical Society 1983, V102,
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=> s 110 and ethoxymethyl

24478 ETHOXYMETHYL

12 L10 AND ETHOXYMETHYL

=> d scan

L11 12 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

1H-Imidazo[4,5-c]quinoline-1-propanamine, 4-amino-2-(ethoxymethyl)-IN 6,7,8,9-tetrahydro- (9CI)

C16 H25 N5 O

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):11

L11 12 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

Methanesulfonamide, N-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]-1,1-dimethylethyl]- (9CI)
C18 H25 N5 O3 S IN

MF

$$\begin{array}{c|c} & & & & & \\ & NH & & S-Me \\ & & & & \\ & CH_2-C-Me & O \\ & & & \\ & Me \\ & & & \\ & Me \\ & & & \\$$

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 12 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

2-Thiophenesulfonamide, N-[4-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]butyl]-, mono(trifluoroacetate) (9CI) C21 H25 N5 O3 S2 . C2 H F3 O2

CM 2

L11 12 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

IN Carbamic acid, [2-[2-(ethoxymethyl)-5-oxido-1H-imidazo[4,5-c]quinolin1-yl]-1,1-dimethylethyl]-, 1,1-dimethylethyl ester (9CI).

MF C22 H30 N4 O4

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 12 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

IN Sulfamide, N'-[4-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin1-yl]butyl]-N,N-dimethyl-, mono(trifluoroacetate) (9CI)

MF C19 H28 N6 O3 S . C2 H F3 O2

CM 2

L11 12 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

IN 1H-Imidazo[4,5-c]quinoline-1-ethanamine, 4-amino-2-(ethoxymethyl)
α,α-dimethyl- (9CI)

MF C17 H23 N5 O

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 12 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

IN Methanesulfonamide, N-[3-[4-amino-2-(ethoxymethyl)-6,7,8,9-tetrahydro-1H-imidazo[4,5-c]quinolin-1-yl]propyl]- (9CI)

MF C17 H27 N5 O3 S

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 12 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

IN Methanesulfonamide, N-[4-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]butyl]-, mono(trifluoroacetate) (9CI)

MF C18 H25 N5 O3 S . C2 H F3 O2

CM 2

L11 12 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

IN Carbamic acid, [2-[2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]1,1-dimethylethyl]-, 1,1-dimethylethyl ester (9CI)

MF C22 H30 N4 O3

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 12 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

IN 1-Naphthalenesulfonamide, N-[4-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]butyl]-5-(dimethylamino)-, mono(trifluoroacetate) (9CI)

MF C29 H34 N6 O3 S . C2 H F3 O2

CM 2

L11 12 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

IN Carbamic acid, [2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin1-yl]-1,1-dimethylethyl]-, 1,1-dimethylethyl ester (9CI)

MF C22 H31 N5 O3

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 12 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

IN Methanesulfonamide, N-[3-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]propyl]- (9CI)

MF C17 H23 N5 O3 S